

Iwao HINO & Ken KATUMOTO*: *Linopeltis*, a new genus
of the Micropeltaceae

日野 巖・勝本 謙*: ミクロペルチス科の一新属リノペルチス

In the course of the mycologic examination of Mr. Muroi's collection accumulated during his journey in the Ryûkyûs, the writers had a good fortune to find out several new fungi hitherto unknown to the south-western mycoflora of Japan. In the previous report the writers published a new genus *Helicothyrium* found on the culm of *Fleioblastus linearis* Nakai, and held that the fungus was one of the tropical elements of the mycoflora of the south-western Japan.

In this report the writers wish to describe another fungus which is new to the mycoflora of Japan and seems to be also one of the tropical elements. The writers gratefully acknowledge their indebtedness to Mr. Hiroshi Muroi for supplying the collection of bambusicolous fungi in the Ryûkyûs.

The morphology of the fungus

The pellicles are scattered on the surface of the culms of *Fleioblastus linearis* Nakai or *Sinobambusa tootsik* Makino, blackishbrown, elliptic or oblong, irregularly coalesced and sometimes expanded to almost all portions of the culm, with indefinite margin, membranous, thin, pseudoparenchymatous and composed of polygonal cells. The ascomata are densely gregarious on the pellicle, superficial, linear, frequently curved, sometimes ramose to form Y- or T-shape, convex, glabrous, with single hymenium, 0.3-1.8 mm long, 200-300 μ in width and 80-100 μ in height. The contexture of the ascomata is coriaceous, pseudoparenchymatous, fuliginous, longitudinally dehiscent and composed of polygonal cells. The asci are clustered, more or less obliquely arranged at the basal corner of the ascomata, elliptic or oblong, rounded at the apex, shortly pedicellate, containing eight spores, without paraphyses and

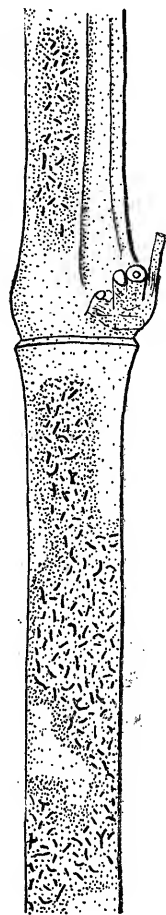


Fig. 1. Ascoma on the culm of *Sinobambusa tootsik* Makino.

* Laboratory of Plant Pathology, Faculty of Agriculture, Yamaguti University. 山大学農学部植物病理研究室

42.5–52.0×14.5–23.0 μ . The ascospores are fasciculated, long fusoid or rather vermiculariform, obtuse at both ends, straightened or somewhat curved, 8–11-septate, not constricted at the septa, smooth, blackish-fuscon, guttate and 32.5–42.0×4.5–5.5 μ .

The taxonomy of the fungus

The fungus in question is entirely superficial, without free mycelia and forms very thin pellicle around the ascomata. The hypopodia, the hypostroma or the internal mycelia are not found, and it seems to be saprophytic on the culms of the host plant. The upper wall of the ascomata is coriaceous, pseudoparenchymatous and not arranged in radial construction. The basal portion of the ascomata is composed of thin membrane of hyaline hyphae. The asci are formed at the lateral corner of the basal part to the ascomata, and tilt toward the centre. It may naturally lead to the conclusion from these characteristics mentioned above that the present fungus is to belong to the family Micropeltaceae, and neither to the family Microthyriaceae nor to the order Hysteriales.

In the family Micropeltaceae there are a small number of genera which have the linear ascomata. The genus *Schizothyrium* has a strong resemblance in morphology to the fungus in question, and has the superficial and linear ascomata which are longitudinally rimose and furnished with the single hymenium beneath, though the ascospores are hyaline and 2-celled. Several phragmosporous genera are found in this family, but almost all of them have the round ascomata and the hyaline ascospores. The principal characteristics of the related genera in the family Micropeltaceae are tabulated in the following table to judge by comparison the genus in question.

	Ascomata	Paraphyses	Ascospores
<i>Schizothyrium</i> Desm.	superficial, linear, with cleft, pseudoparenchymatous, with single hymenium	—	2-celled, hyaline
<i>Micropeltis</i> Mont.	superficial, without mycelia, round, with single hymenium	+	4-celled, hyaline

<i>Protopeltis</i> Syd.	superficial, round, with reticulate mycelia, plectenchymatous, astomous	+	pluricelled, hyaline
<i>Mitopeltis</i> Speg.	superficial, round, on subicle, pseudoparenchymatous, with single hymenium	—	pluricelled, hyaline
<i>Phragmothyriella</i> Speg.	superficial, round, pseudoparenchymatous, with single hymenium	—	pluricelled, hyaline
<i>Linopeltis</i> Hino et Katumoto	superficial, linear, with cleft, pseudoparenchymatous, with single hymenium, with pellicle	—	pluricelled, blackish-fuscos

As shown above none of the genera in the family Micropeltaceae are found to correspond to the writers' fungus. The linear ascomata and the fuscous pluriseptate ascospores of the fungus in question are clearly distinct from those of other genera. The writers accordingly wish to establish a new genus to name it *Linopeltis*.

The technical description of the fungus

The technical diagnosis of the new genus is as follows:

***Linopeltis* Hino et Katumoto gen. nov.**

Pelliculis superficialibus, tenuiter effusis, pseudoparenchymaticis, ex cellulis polyhedricis, atrobrunneis compositis; ascomatibus gregariis, super-

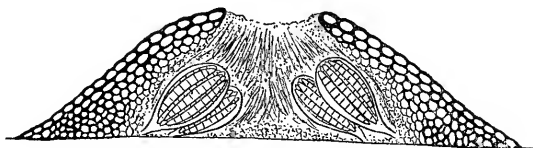
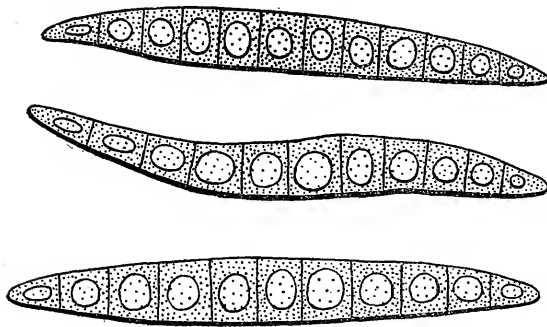


Fig. 2. Ascoma.

Fig. 3. Ascospores ($\times 1800$).

ficilibus, linearibus, rectis vel plerumque curvatis, interdum ramosis, convexis, glabris; contextu coriaceo, pseudoparenchymatico, atro-fuligineo, longitudinaliter rimoso, ex cellulis polyhedricis composito; ascis ellipticis vel oblongis, apice rotundatis, stipitatis, octosporis, apa-

raphysatis; ascosporidiis fasciculatis, longi fusoideis vel vermiculariformibus, apice utrinque obtusis, rectis vel paulo curvatis, multiseptatis, laevibus, atrofusci, guttatis.

Typus: *Linopeltis ryukyuensis* Hino et Katumoto

Linopeltis ryukyuensis Hino et Katumoto, spec. nov.

Pelliculis superficialibus, tenuiter effusis, pseudoparenchymaticis, atro-brunneis; ascomatibus gregariis, superficialibus, linearibus, plerumque curvatis, interdum ramosis et Y- vel T-formibus, convexis, glabris, 0.3–1.8 mm longis, 200–300 μ latis, 80–100 μ altis; contextu coriaceo, pseudoparenchymatico, atro-fuligineo, longitudinaliter rimoso; ascis ellipticis vel oblongis, apice rotundatis, stipitatis, octosporis, aparaphysatis, 42.5–52.0 \times 14.5–23.0 μ ; ascosporidiis fasciculatis, longi fusoideis vel paulo vermiculariformibus, apice utrinque attenuatis et obtusis, rectis vel paulo curvatis, 8–11-septatis, non constrictis, laevibus, atro-fusci, guttatis, 32.5–42.0 \times 4.5–5.5 μ .

Hab. in culmis vivis *Sinobambusae tootsik* (Bizen-narihira). Syana, Nakizinmura, Ryûkyû (Julius 26, 1959. H. Muroi—Typus in Herb. Fac. Agr. Univ. Yamaguti); in culmis vivis *Fleiblastus linearis* (Ryûkyûtiku). Gogayama. Nakizinmura et Mt. Yonahadake, Kunigamimura, Ryûkyû (Julius 26, 1959. H. Muroi).